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TASMANIA

1982

PARLIAMENT OF TASMANIA

DEPARTMENT OF MAIN ROADS

REPORT FOR YEAR 1980-81

Presented to both Houses of Parliament by His Excellency's Command

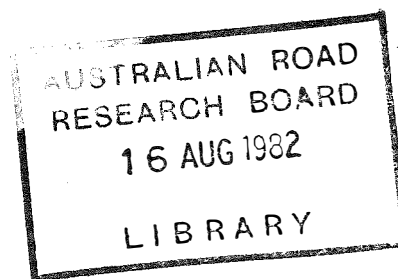
By Authority:

I. C. CARTER, Acting Government Printer, Tasmania



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FIFTH ANNUAL REPORT For the year ended 30 June 1981

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DEPARTMENT OF MAIN ROADS

Director of Main Roads — G. E. C. McKERCHER

Assistant Director — L. J. BAILY

Secretary — K. G. RASMUSSEN

PRINCIPAL OFFICERS — HEAD OFFICE

Assistant Secretary — R. F. READ

Chief Accountant — F. J. DRAKE

Principal Engineer, Design — Vacant

Principal Engineer, Construction — D. A. WHARMBY

Division Engineer, Road Design — W. D. COOMBS

Division Engineer, Road Construction — O. A. WILSON

Division Engineer, Bridges — I. A. GAGGIN

Division Engineer, Plant — F. N. LAKIN

PRINCIPAL OFFICERS — DISTRICTS

District Engineer, South-East, Derwent Park — M. G. LINTON

Executive Officer — G. S. GRIGGS

District Engineer, North-East, Launceston — P. A. MEYER

Executive Officer — R. A. PETERS

District Engineer, North-West, Ulverstone — J. H. DRISCOLL

Executive Officer — C. J. MORGAN

DEPARTMENT OF MAIN ROADS

ANNUAL REPORT FOR 1980-81

FOREWORD

During 1980-81 the Department completed and opened to traffic several important projects which were reported as under construction in preceding years. These projects include the Jordan River Bridge on the East Derwent Highway, the East Tamar Outlet Road from Mowbray Connector to Alanvale, the Ulverstone By-Pass, the Hobart Eastern Outlet Road from Rosny to Mornington and the Station Road Deviation at St Leonards.

In June 1981 the Commonwealth enacted the Roads Grants Act 1981 to provide financial assistance to the States for roads in the financial year 1981-82. The total grant to Tasmania for next year is \$30 243 000, made up as follows:—

		\$
National Roads — Construction and Maintenance	....	13 984 000
Arterial Roads — Construction	....	8 037 000
Local Roads — Construction and Maintenance	....	8 222 000
TOTAL	....	\$30 243 000

The amount of \$30.243 million provided for 1981-82 is an increase of only 9 per cent over the amount of \$27.726 million provided in 1980-81.

The number of road categories in the 1981 Act has been reduced to three by providing a single category of Arterial Roads in place of the categories of Rural Arterial and Urban Arterial Roads in the previous Act.

Section 24 of the Roads Grants Act 1981 requires that the State must call tenders for construction of National Highway projects or parts of projects.

Under arrangements to be approved by the Commonwealth, the Department will be permitted to tender for National Highway construction works in competition with private enterprise, and the Department intends to tender for those works which it has traditionally carried out by day labour.

If the tender is successful, the Department will then be required to carry out the work in accordance with the relevant parts of the contract documents on the same basis as if the works were being carried out by a private contractor, i.e. within the limits of price and time tendered (subject to such extensions, variations, additions and claims as are allowable under the contract documents).

This Commonwealth requirement of open tendering for all National Highway construction works has potentially serious implications for the Department's day labour employees and raises a number of issues to be faced by both management and labour. Identification and investigation of these issues has commenced.

FINANCE

GENERAL

The Department has continued to monitor the rising cost of its operations by the use of a road construction price index.

The Department's index has, over the last eleven years, increased at a greater rate than the Consumer Price Index. This is probably due in part to the fact that a significant component of the Department's index is made up of wage rates.

The Road Price Index rose by 10.8 per cent during 1980-81 while the Consumer Price Index increased by 8.8 per cent. Over the same period the weighted average weekly wage paid to adult males working in the building and construction industry in Tasmania, as reported by the Australian Bureau of Statistics, rose by 12.8 per cent.

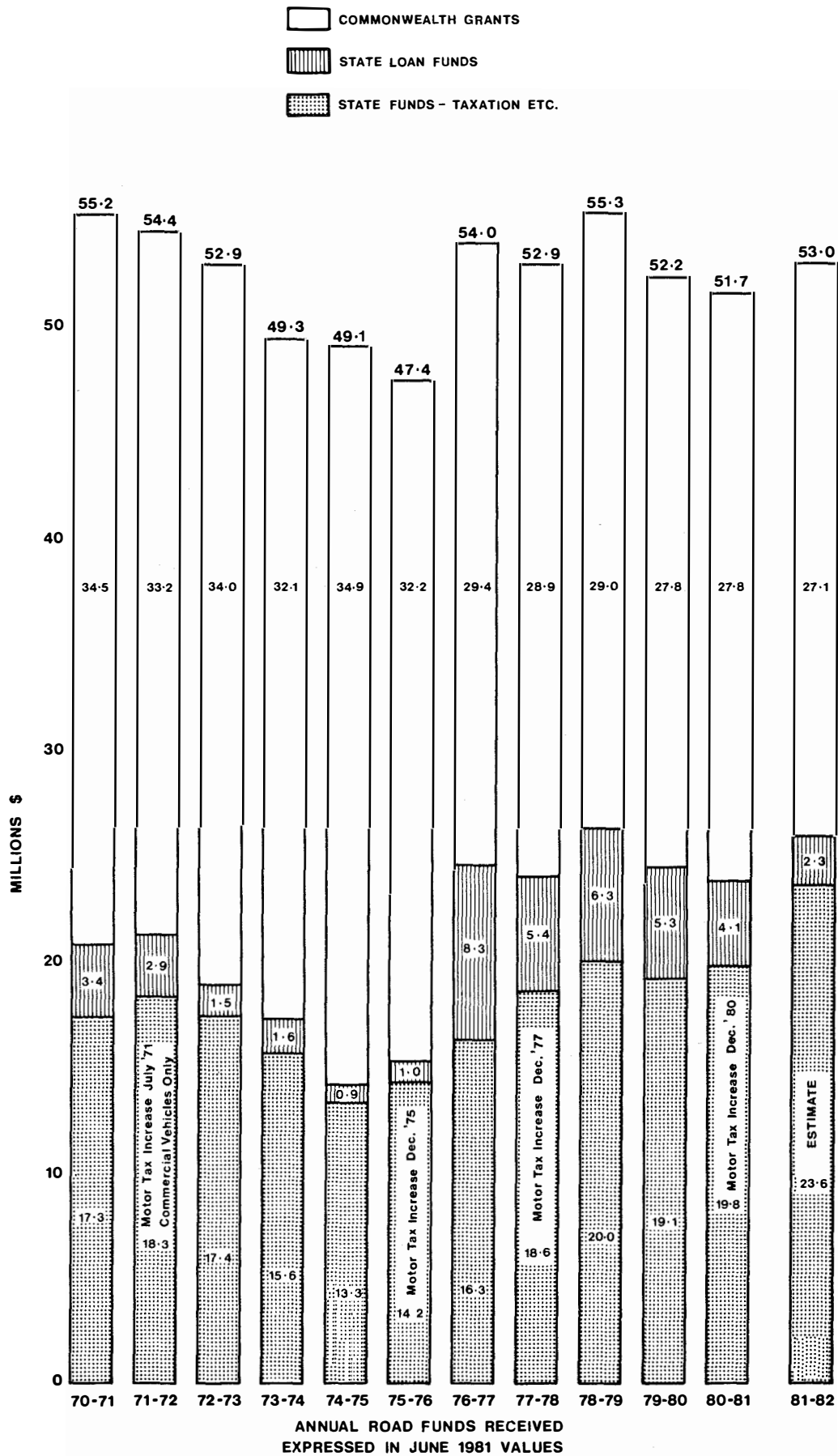
The comparison between the index developed by the Department and the Consumer Price Index adjusted to the same base year is set out below —

<i>Date 30 June</i>	<i>D.M.R. Road Index</i>	<i>Consumer Price Index</i>
1970	100.0	100.0
1971	110.8	104.6
1972	122.0	111.3
1973	133.8	119.3
1974	162.4	136.8
1975	199.3	159.3
1976	233.6	183.0
1977	263.5	206.8
1978	283.3	224.0
1979	300.6	243.6
1980	337.6	268.3
1981	374.1	292.1

The rate of inflation affecting the operations of the Department of Main Roads for the financial year 1981-82 is currently estimated to be 11.5 per cent per annum. Commonwealth Grants available to the Department for road purposes were indexed by 7.48 per cent for 1979-80, 11.15 per cent for 1980-81 and 9 per cent for 1981-82.

The bar chart opposite illustrates the funds received by the Department for roadworks. In each case the funds have been adjusted to June 1981 values by using the Department's road price index.

The sensitivity of State funds to rises in motor taxation rates is clearly visible. The increase in State funds during recent years has not been sufficient to make up for the short fall in Commonwealth funds.



MOTOR TAXATION

Receipts from motor taxation were \$17 728 961 an increase of 18·8 per cent over the preceding year, while public vehicle fees decreased by 43·1 per cent to \$639 720 in 1980–81.

MISCELLANEOUS RECEIPTS

Receipts from this source were \$1 379 678, compared with \$970 683 in 1979–80, and includes tolls received from the woodchip industry as well as reimbursement from the Commonwealth for transport planning and research expenditure and the proceeds from the sale of surplus property.

COMMONWEALTH GRANTS FOR ROADS

The Commonwealth Government under the provisions of the Roads Grants Act 1980 provided finance to Tasmania for the 1980–81 financial year only.

The total grant to Tasmania was made up as follows:—

	\$
National Roads — Construction and Maintenance	12 820 000
Urban Arterial Roads — Construction	3 535 000
Rural Arterial Roads — Construction	3 833 000
Local Roads — Construction and Maintenance	7 538 000
TOTAL	\$27 726 000

In order to qualify for the grant Tasmania was required to expend on roadworks from its own resources a quota of \$15 900 000 in 1980–81.

All financial assistance payable under the Roads Grants Act 1980 was received.

LOAN FUNDS

Loan funds provided to the Department for roads, bridges and other works totalled \$4 591 867, a decrease of 8·6 per cent on the previous year.

FUNDS PROVIDED BY OTHER DEPARTMENTS AND AUTHORITIES

Payments received by the Department for works and services carried out for other Departments and Authorities amounted to \$2 433 132 compared with \$2 492 188 in 1979–80. The Department was involved in undertaking major roadworks for the Hydro-Electric Commission on the Pieman River Power Development Scheme, and minor works for the National Parks and Wildlife Service and the Department of Housing and Construction.

STATEMENT OF SOURCE AND APPLICATION OF FUNDS

Funds provided during 1979–80 from all sources amounted to \$62 799 973, an increase of 22·7 per cent over the previous year as shown in the statement below —

SOURCES OF FUNDS

1979–80 \$		1980–81 \$	\$
	State Highways Trust Fund—		
17 019 073	(a) State Motor Taxation, Public Vehicle Fees and Miscellaneous Receipts	19 748 359	
24 944 000	(b) Commonwealth Grants for Roads	27 726 000	
			47 474 359
5 022 305	Loan Funds		4 591 867
637 155	Special Commonwealth Funds		6 793 830
1 052 567	Consolidated Revenue Fund		888 142
2 492 188	Funds Provided by other Departments and Authorities		2 433 132
	Net Decrease in Funds carried forward		618 643
\$51 167 288			\$62 799 973

APPLICATION OF FUNDS

1979-80		1980-81	
\$		\$	\$
	State Highways Trust Fund—		
33 048 313	Roadworks	40 499 233	
8 405 423	Bridgeworks	7 587 174	
8 994	Ferries	6 595	
500 343	Net increase in funds carried forward .....	.....	48 093 002
	Loan Funds—		
3 834 254	Roadworks	3 621 689	
977 246	Bridges	658 311	
150 000	Jetties and Facilities for Fishermen	124 624	
60 805	Launceston Flood Protection	187 243	4 591 867
	Special Commonwealth Funds—		
637 155	Second Hobart Bridge	6 793 830	6 793 830
	Consolidated Revenue Fund—		
334 085	Departmental Administration	371 198	
107 733	Workers' Compensation (Other Departments)	149 959	
100 000	Repairs to Jetties	75 000	
	Contributions and Grants for Sundry Buildings and Facilities and Miscellaneous		
399 446	Expenses	173 495	
111 303	Other Miscellaneous Expenses Including Recreation Ground Subsidies	118 490	888 142
2 492 188	Works for Other Departments and Authorities .....	.....	2 433 132
\$51 167 288	TOTAL .....	.....	\$62 799 973

STATE HIGHWAYS TRUST FUND

The State Highways Trust Fund Account is established under the Roads and Jetties Act 1935. The fund is credited with the following moneys:—

- (1) all grants made by the Commonwealth under the Roads Grants Act 1980;
- (2) funds received by the Department from grants made to the State by the Commonwealth under the Transport Planning and Research (Financial Assistance) Act 1977;
- (3) all State motor taxation;
- (4) the net amount of registration fees for motor vehicles, licence fees for drivers and renewal and transfer fees;
- (5) public vehicle fees imposed under section 20A of the Traffic Act 1925;
- (6) contributions by Municipal Councils for the maintenance of classified roads;
- (7) receipts from sale of stores (other than plant);
- (8) any moneys provided by Parliament for the purposes of the fund; and
- (9) such other moneys (if any) as the Treasurer may direct.

The fund is debited with the following:—

- (a) expenses incurred in the construction, reconstruction and maintenance of State highways and other classified roads;
- (b) costs incurred in the maintenance of Council roads which the Minister has agreed to subsidise;
- (c) contributions to the Bruny, Flinders and King Island Municipalities of portion of the Motor Tax collected in those Municipalities;
- (d) all expenditure incurred under the provisions of the Roads Grants Act 1980 and the Transport Planning and Research (Financial Assistance) Act 1977;
- (e) costs of stores and materials (other than plant); and
- (f) repair and renewal of bridges on Council roads.

A summarised statement of receipts and payments for the State Highways Trust Fund Account for 1980-81 is set out below, together with the corresponding figures for 1979-80:—

STATE HIGHWAYS TRUST FUND 1980-81

1979-80		<i>Receipts</i>	1980-81
\$			\$
492 984	Balance brought forward	....	993 327
24 944 000	Commonwealth Grants for roads	....	27 726 000
14 924 932	Motor Taxation	....	17 728 961
1 123 458	Public Vehicle Fees	....	639 720
970 683	Miscellaneous Receipts	....	1 379 678
\$42 456 057	TOTAL	....	\$48 467 686
		<i>Payments</i>	
11 137 053	National Roads	....	12 886 100
7 570 948	Urban Arterial Roads	....	11 018 635
12 276 983	Rural Arterial Roads	....	12 853 575
9 250 254	Local Roads	....	10 565 040
719 087	MITERS	....	229 379
508 405	Transport Planning and Research	....	540 273
993 327	Balance carried forward	....	374 684
\$42 456 057	TOTAL	....	\$48 467 686

LOAN FUND EXPENDITURE

The loan funds of \$4 591 867, allocated to the Department for roads and bridges and other works, were applied as follows:—

1979-80			1980-81
\$			\$
4 811 500	Roads and Bridges	....	4 280 000
210 805	Other Works	....	311 867
\$5 022 305	TOTAL	....	\$4 591 867

A schedule of expenditure items and amounts is shown in Annexure A. It should be noted that the loan fund amounts for the road and bridge items listed in the schedule were in most cases supplemented by funds from the State Highways Trust Fund.

FINANCIAL ASSISTANCE TO LOCAL GOVERNMENT AUTHORITIES

Under the provisions of the Roads Grants Act 1980 and the Roads and Jetties Act 1935 the Department made direct grants to local government authorities for construction and/or maintenance of roads controlled by Councils. The direct grants to Councils totalled \$6 233 156, an increase of 1.4 per cent over the amount of the direct grants provided in 1979-80.

In addition to the direct grants, the Department also provided indirect financial assistance to local government authorities. Under the provisions of the Roads and Jetties Act the Department financed the repair and renewal of bridges on Council roads and carried out these bridgeworks. The Department maintained those Council roads which have been declared as subsidised roads and provided funds to the National Parks and Wildlife Service for work on Council roads. The indirect financial assistance to Councils totalled \$1 841 786, an increase of 32.4 per cent over the preceding year.

The total of direct grants and indirect financial assistance to Councils was \$8 075 288, an increase of 4.7 per cent over 1979-80. The amounts of direct grants and indirect financial assistance to Councils for the various categories of roads and works are shown in Annexure B.

PLANNING AND DESIGN

PROJECT PLANNING

The Department has maintained its policy of close liaison with other Government Departments and Planning Authorities in relation both to new highway projects and to proposed developments which could have a significant impact on the existing or proposed highway system. On a State-wide basis consultation is with the Town and Country Planning Commission, at regional level with the Southern Metropolitan Master Planning Authority, the Tamar Regional Master Planning Authority and the North-West Master Planning Authority and at local level with appropriate Council. The more important projects are listed below —

Burnie Highway Environmental Impact Study (BHEIS)

Following representations to the Federal Minister for Transport, Stage B of the Burnie System was declared part of the National Highway System. This declaration permitted land acquisitions and detailed design to proceed.

The priority of the BHEIS recommendations for Stage C are being assessed in relation to the State's rural arterial road program and will be scheduled accordingly.

Bass Highway — Don to Ulverstone

Consultants continued the planning of this section of the National Highway, but progress was slow due partly to changes in personnel in the consulting engineer's office and partly due to revised DOTA guide-lines. The remainder of the work on this project will be undertaken by Departmental engineers and draftsmen.

Bass Highway — Penguin to Burnie

The engineering feasibility of a proposed deviation to the south of Preservation Bay and Sulphur Creek has been established.

Bass Highway — Wynyard to Sisters Hills

A number of alternative alignments for improvements to the highway were investigated and reported upon.

Tasman Highway — Waverley

A joint project has been commenced with St Leonards Council to investigate the options for upgrading the 1.3 km section of the Tasman Highway east of St Leonards Road. Possible local deviations of the highway have been included in the investigations.

West Tamar Highway at Riverside

Proposals to re-develop the Riverside Shopping Centre and subdivisional expansion at Riverside are being considered in relation to the level of service provided by the West Tamar Highway. Investigations will continue into the 1981-82 year.

East Derwent Highway — Shones Corner to Bowen Bridge

Further investigation into an appropriate alignment of this section of the East Derwent Highway, and a suitable junction at Shones Corner were investigated in accordance with guidelines laid down by the Joint Committee for the Second Hobart Bridge.

Glen Dhu Housing and Re-development Study

A public display was held in Launceston from 25 August till 5 September 1980. Displays were all options considered, but emphasising the main alternatives, namely, a new route generally along the Glen Dhu Corridor, or widening of the existing Wellington Street. The display was well covered in the media and 250 members of the public visited it. Sixty written submissions were received and these showed approximately equal support for (or opposition to) each of the main alternatives.

After considering the outcome of the public display and all other available evidence, the Steering Committee in December 1980 recommended to the Government and the Government approved a new route generally along the Glen Dhu Corridor. The detailed design of the new route is currently being carried out by the Department in consultation with a Design Review Group comprising members of the Launceston City Council, the Transport Commission and the Department, who report to the Steering Committee.

Significant changes have been made to the original design including a new link road and interchange located between Melbourne and Shamrock Streets. This has been jointly accepted by the Launceston City Council and the Government and it is anticipated that this interchange will be completed in the 1984-85 financial year along with the southern section of the Southern Outlet from Strathroy Bridge.

Design work has progressed to the stage where all property requirements south of Patrick Street have been defined, and it is hoped that property requirements north of Patrick Street will be known by the end of 1981.

King's Meadows Connector

Discussions with land-owners, and in particular the Commonwealth Department of Administrative Services, have been held as part of the investigations to determine a new location for this route away from the previously proposed route along Merino Street.

Hobart Southern Outlet

The Department's proposals were displayed at public exhibitions held at Huonville and in Hobart.

East Tamar Outlet

Following discussions with the Lilydale Council, it has been agreed that a route should be retained for a future extension in the long term of the East Tamar Outlet north of the Alanvale Connector. Planning to identify the optimum location of the required Corridor has commenced.

MIDLAND HIGHWAY

Bridgewater By-Pass

Planning for a by-pass of the Bridgewater town centre has been substantially completed. A public display of the preferred route and detailed design will follow the completion of planning.

Bridgewater to Bagdad

A preliminary investigation has commenced to define the possible options to by-pass the existing frontage development through Brighton, Pontville and Bagdad.

Oatlands By-Pass

The general route of the By-Pass was determined some years ago. During 1980-81 investigation into the most appropriate connectors to the town on the eastern side, and to the rural area on the western side of the by-pass commenced. Suitable plans are being prepared for public display following which a Highway Planning Report for submission to the Commonwealth Government will be prepared.

ROAD DESIGN

Second Hobart Bridge — Road Approaches

To match the approach roads on Bowen Bridge detailed design is in progress for the road improvements necessary to connect the bridge approach roads with the Brooker Highway on the Western shore and Shones Corner on the Eastern shore.

BASS HIGHWAY**Old Surrey Road to Chasm Creek**

The method adopted for limiting frontage access included an extension of the present service road through Wivenhoe. The designs for this service road and the dual carriageway section have been substantially completed. This project has also involved the relocation of 1.8 km of ANRC railway line as a result of the road widening.

Prospect By-Pass

Design work has commenced on this project which is expected to be constructed immediately following the completion of the Strathroy to Mt Pleasant section of the Midland Highway and the Prospect Connector.

Deloraine By-Pass

Detail design of the by-pass is in progress on the approved route.

Burnie Stage B

Survey and design work commenced immediately after the Federal Government's acceptance of the BHEIS report and its recommended alignment for Stage B.

This project will be one of the first major schemes to be let out to contract under the requirements of the Roads Grants Act 1981 and the design activities are being carried out with this in mind.

Devonport to Latrobe

Design of this project was completed during the year. A supplementary Highway Planning Report was prepared in support of the Department's design and to suggest ways by which the present construction might be brought to full freeway standard in the future.

SOUTHERN OUTLET, LAUNCESTON**Strathroy to Melbourne Street**

Design of the major part of this route, excluding the Mount Pleasant and Glen Dhu Interchanges, has been completed. The balance of the work will be undertaken in 1981-82.

MIDLAND HIGHWAY**Jordan River to Oatlands**

Design plans for this section were completed during the year.

BROOKER HIGHWAY**Berriedale to Granton**

Detail design was substantially completed in 1980-81.

BRIDGE DESIGN

The more important designs completed were —

- Clyde River Bridge on the Lake Highway at Bothwell
- Westbury Road Overpass on Westbury Road at Prospect.
- Henty River Bridge on the Strahan to Zeehan Road.
- Chasm Creek Bridge on the Bass Highway at Wivenhoe.
- Stephensons Bend Retaining Wall on East Tamar Outlet Road at Mowbray.

The more important designs in hand but not completed were:—

- Prospect Interchange Underpass on the Southern Outlet Road at Prospect.
- Mole Creek Road Overpass on the deviation of the Bass Highway at Deloraine.
- Meander River Bridge on the deviation of the Bass Highway at Deloraine.
- Railway Underpass on the deviation of the Bass Highway at Deloraine.

TRAFFIC SERVICES

Traffic Counting

The collection of statistics concerning vehicular volumes, speed distributions, turning movements, travel times and vehicle types has continued on the State Road network throughout the year. Increased information has been published in the edition 'Traffic Volumes in Tasmania 1980'. The Department continued to automate both the collection of data and its dissemination.

Road Direction Signing

The first of the new road signs were installed during the year. The new signs incorporate an area code and a route number. The system calls for the issue of road maps. It is considered that when the road maps, showing the route numbering throughout the State are available, the general public will become well informed and appreciate the benefits of the new system.

Vehicle Permits

Over 3 700 permits were issued for the movement of overweight and/or overdimensional vehicles during the year. This represents an increase of 200 per annum in the last two years.

General

Some 800 traffic investigations have been made during the year. Such investigations have ranged from access to the highway to major town by-passes.

RIGHT-OF-WAY CONTROL

Activities in this field, related to the administration and protection of present State Roads and future road corridors, continued throughout the year. During the year the following enquiries were received:—

- (a) 245 subdivision proposals.
- (b) 201 service installations.
- (c) 206 Crown Lands transactions.
- (d) 70 Solicitors' enquiries (mostly section 695 Local Government Act).
- (e) 83 Miscellaneous enquiries.

The processing of Right-of-Way enquiries includes the setting down of conditions and arranging for the Ministerial approvals required by legislation for all service installations within the reservations of State Roads, together with recommendations to the Town and Country Planning Commission and local Councils as to the effects of proposed developments and subdivisions adjoining proclaimed State Highways and subsidiary roads. Suggestions are also put forward as to the conditions that should be imposed by those Authorities under the Local Government Act in order to minimise the effects on level of service and safety of State roads by the proposed developments and/or subdivisions.

There has been increasing evidence in recent times that poorly designed subdivisions and ribbon development can lead to excessive side friction, reduced road safety and a decrease in the level of traffic service on abutting roads. This can generate demands for road improvements which otherwise would not be required. It is clear that in the current climate of restricted public finance, it is very important to ensure that the public investment in existing road assets is protected to guard against unnecessary expenditure.

LAUNCESTON FLOOD PROTECTION SCHEME

The Department continued to provide engineering liaison and a check on the expenditure of State funds provided for capital works and the maintenance of the flood protection system being carried out by the Launceston City Council in accordance with the terms of the agreement. As a result of a special representation by the Launceston City Council, the State made \$200 000 available for urgently required capital works. The main items were the reconstruction of three drainage outfalls through the levees. This work was necessary because of damage to the existing outfalls caused by settlement. Other work included the topping up of levee embankments to design height and the progressive construction of a sprinkler system to the Esplanade levee. Approximately \$187 000 out of the \$200 000 available was expended by the Launceston City Council on these works.

MARINE BOARD WORKS

Port of Grassy, King Island

The Department has a continuing brief for engineering oversight of this Port. Liaison was carried out as necessary with the Treasury and the King Island Marine Board. Renewal of the fire detection system in the Cargo Shed was undertaken by the State at a cost of approximately \$2 000. Investigation is proceeding into local corrosion stains underneath the wharf deck.

Arrangements were made for the Assessor to visit the Port for the purposes of his third and final inspection in April 1981. The report of the Assessor has now been received including the final certificate as provided for in the King Island Port Facilities Agreement Act 1971. Under the terms of this Act and the agreement with the State, the King Island Marine Board is now responsible for the maintenance of the Port including the fire detection system and other utilities.

Marine Board of Burnie

After investigations, reports were prepared for the Transport Commission in accordance with section 73 of the Marine Act 1976 and approval was recommended for —

										\$
(i)	Alterations to South Terminal Wharf — est. cost	....	....	....	....	....	....	....	....	200 000
(ii)	Dredging, drilling, blasting and removal rock est. cost	....	....	....	....	....	....	....	....	300 000
(iii)	Strengthening and levelling of the bund est. cost	....	....	....	....	....	....	....	....	50 000
(iv)	Port Security fencing est. cost	....	....	....	....	....	....	....	....	60 000
	Total estimated cost	....	....	....	....	....	....	....	....	<u>\$610 000</u>

HYDRAULICS

Hydraulic survey was undertaken on a total length of approximately 45 km of road (including 6 km of urban highway) prior to design for new work or reconstruction, including sections of the Midland, Channel, Arthur, Bass, Tasman, Lyell, Lake and Esk highways.

Details hydraulic investigations and drainage designs were carried out on sections or junctions of major highways as follows:—

Hobart Southern Outlet Road.

New Launceston Urban Arterial Road System.

Hobart Northern Outlet Road.

Bass Highway (Deloraine By-Pass, Smithton to Marrawah, Devonport Freeway and Wynyard By-Pass).

East Tamar Highway.

Bowen Bridge approaches.

Approximately 150 separate hydraulic investigations (both major and minor) were made for bridges, culverts and road drainage. Included were works on the majority of highways and main roads as well as on secondary and Council roads; also included were major investigations for the following bridges:—

Jordan River Bridge at Brighton.
 Meander River Bridge at Deloraine.
 Forth River Bridge on Bass Highway.
 St Pauls River Bridge at Avoca.
 Saltwater Creek Bridge.
 Jordan River Bridge at Elderslie.
 Westmore Bridge and St Pauls River Bridge on Old Coach Road near Avoca.

General hydraulic investigations and designs were carried out for several miscellaneous projects including subdivision drainage onto roads, drainage of school and other building areas, flooding problems, erosion control, irrigation etc. Special hydraulic investigations included —

Drainage design for the St Helens Landslip area.
 Stock watering facilities on the Midland Highway.
 Report on stormwater and subsoil drainage at the Ulverstone High School.

Research and Standards

The manual of 'Road Drainage Practice' was completed, approved and issued for use within the Department. This provides comprehensive and detailed information for the design and construction of the Department's road drainage systems.

An investigation into the rationalising of design flood frequency and acceptable flood risk on State roads was completed. The final recommendations for revised flood frequencies were embodied in a paper 'Flood Protection for Tasmanian Roads and Bridges'. The adoption of these revised design criteria should result in economies in bridgework and general drainage.

MAJOR HYDRAULIC WORKS

Lower Charles Street Pumping Station

Investigations indicated that in order to achieve an acceptable degree of flood protection at the Royal Park Interchange on the East Tamar Outlet, disposal of the stormwater by pumping would be desirable. This method of disposal is also desirable for the street drainage in the area. It was therefore agreed to share the costs on a 50/50 basis of a new pumping station in lower Charles Street with the Launceston City Council.

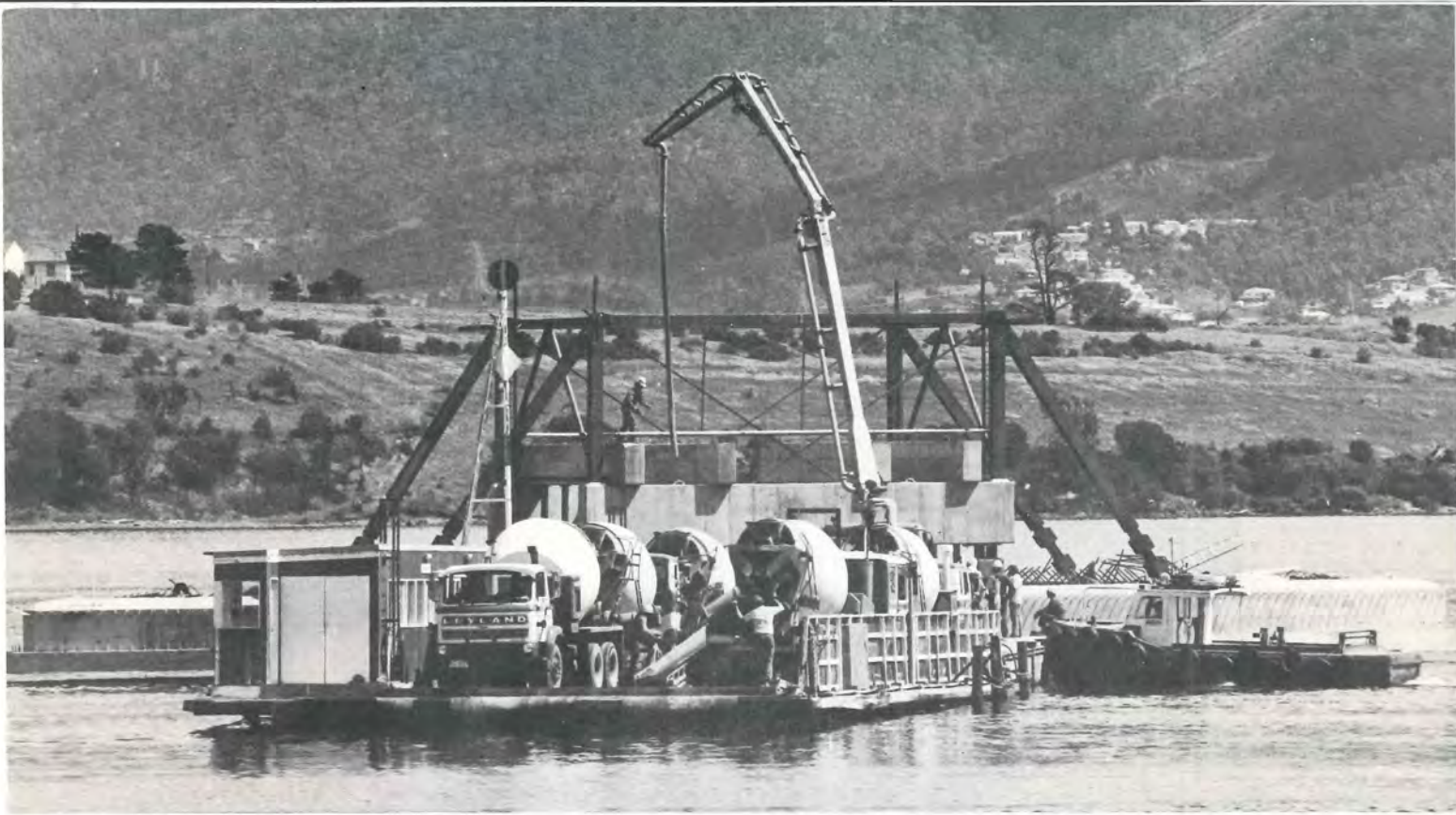
The pumping station was designed by the Launceston City Council and a contract let for the construction of the station and the supply of two stormwater pumps. Construction of the reinforced concrete station building has commenced and the pumps have been supplied. This work should be completed in 1981-82.

CONSTRUCTION, MAINTENANCE AND OPERATIONS

MAJOR WORKS COMPLETED

The following bridgeworks were completed during the year:—

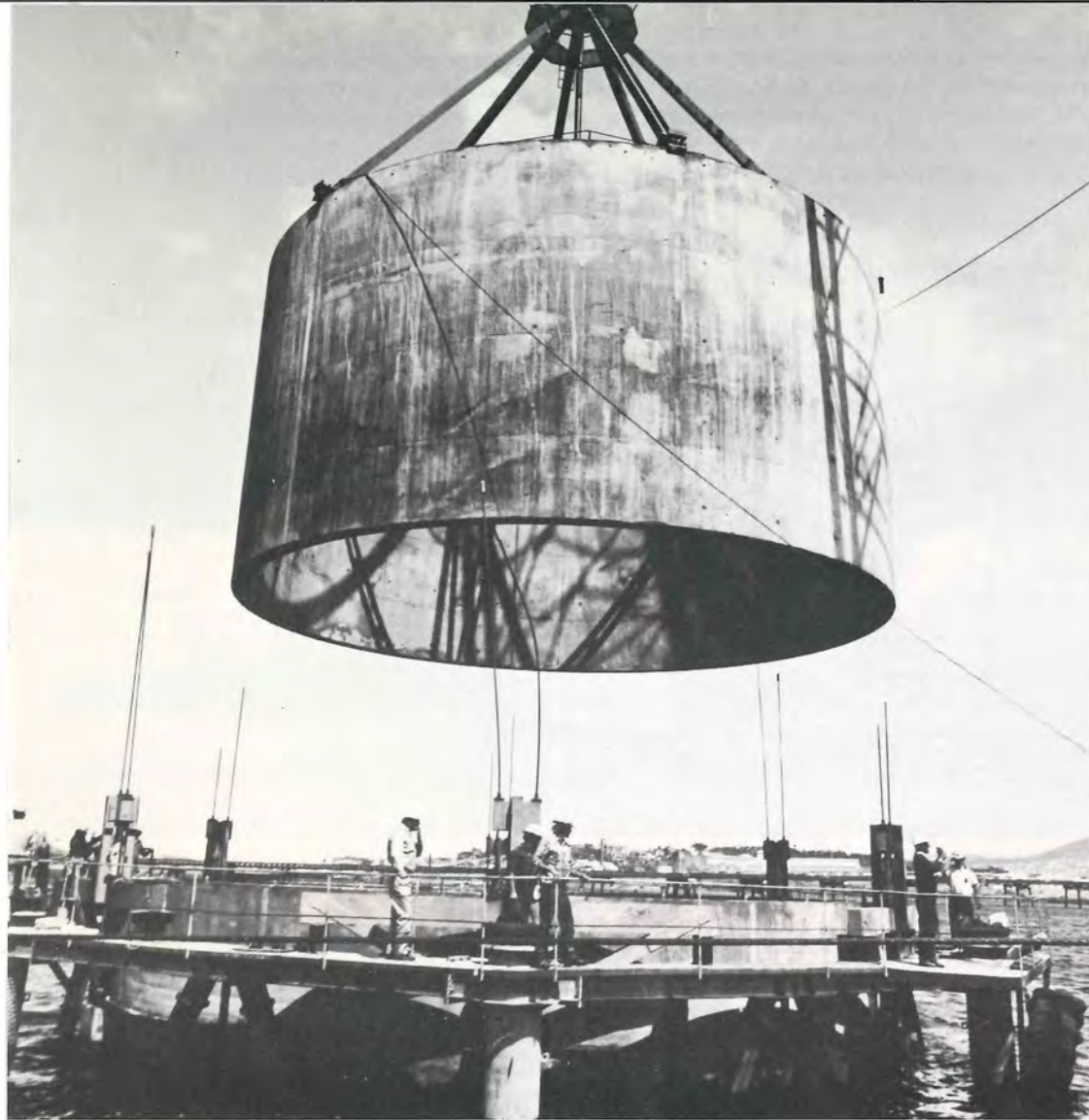
<i>Name</i>	<i>Road</i>	<i>Cost to 30.6.81</i>
		\$
Jordan River	East Derwent Highway	1 449 873
Alanvale Road Underpass	East Tamar Outlet Road	517 895
Castra Main Road Overpass	Ulverstone By-Pass	422 493
Stephenson's Bend Retaining Wall and Ground Anchors — 2nd Stage	East Tamar Outlet Road	418 237
Dampier Street Overpass	Eastern Outlet Road	354 802
Emu River Pipe Bridge	Bass Highway	306 075
Black Snake Road Underpass	Northern Outlet Road	242 017
Supply River Bridge	Winkleigh Main Road	209 059
Grammar School Footbridge	East Tamar Outlet Road	166 445
T.C.A.E. Footbridge	East Tamar Outlet Road	147 700
Forcett Rivulet Bridge	Arthur Highway	133 929



Bowen Bridge — Ex-DMR Risdon Punt 'Bowen' carrying concrete trucks to pier site for concrete pour.

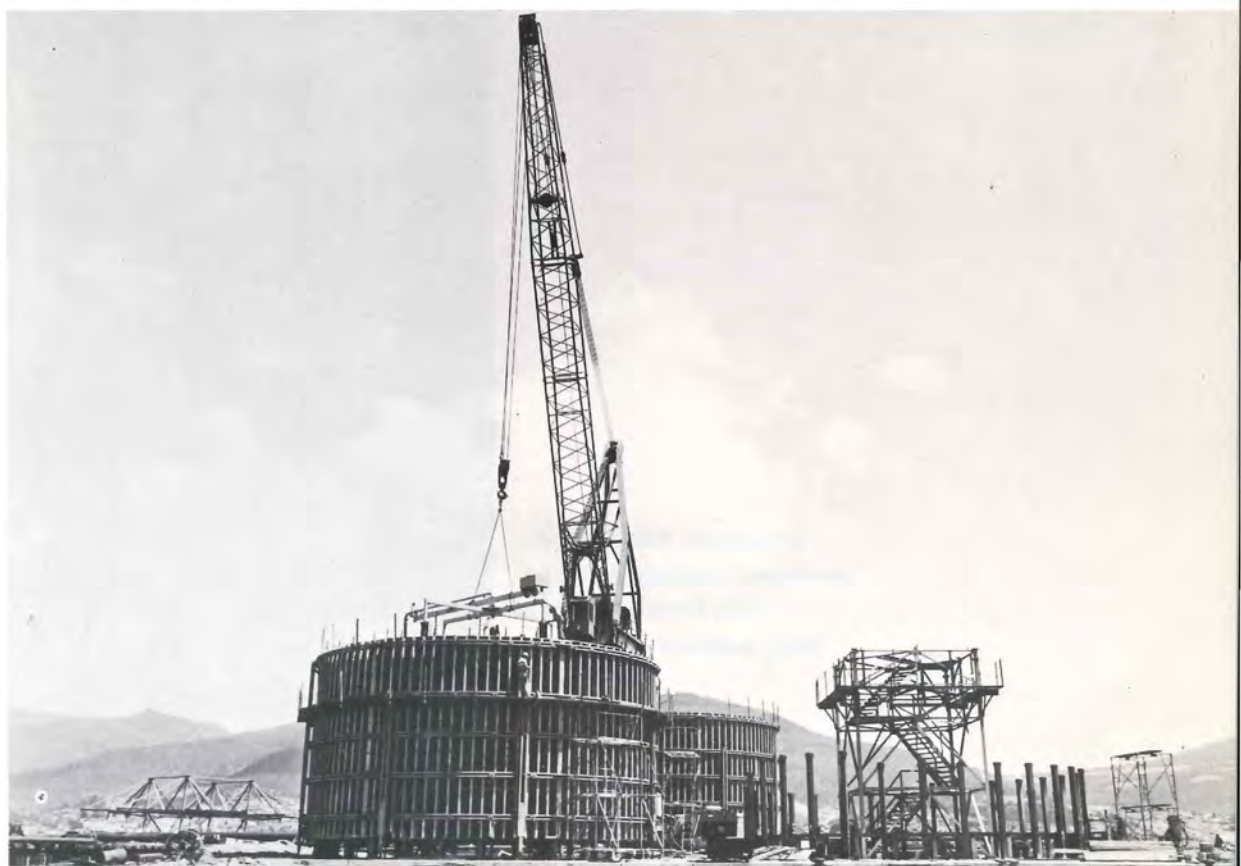


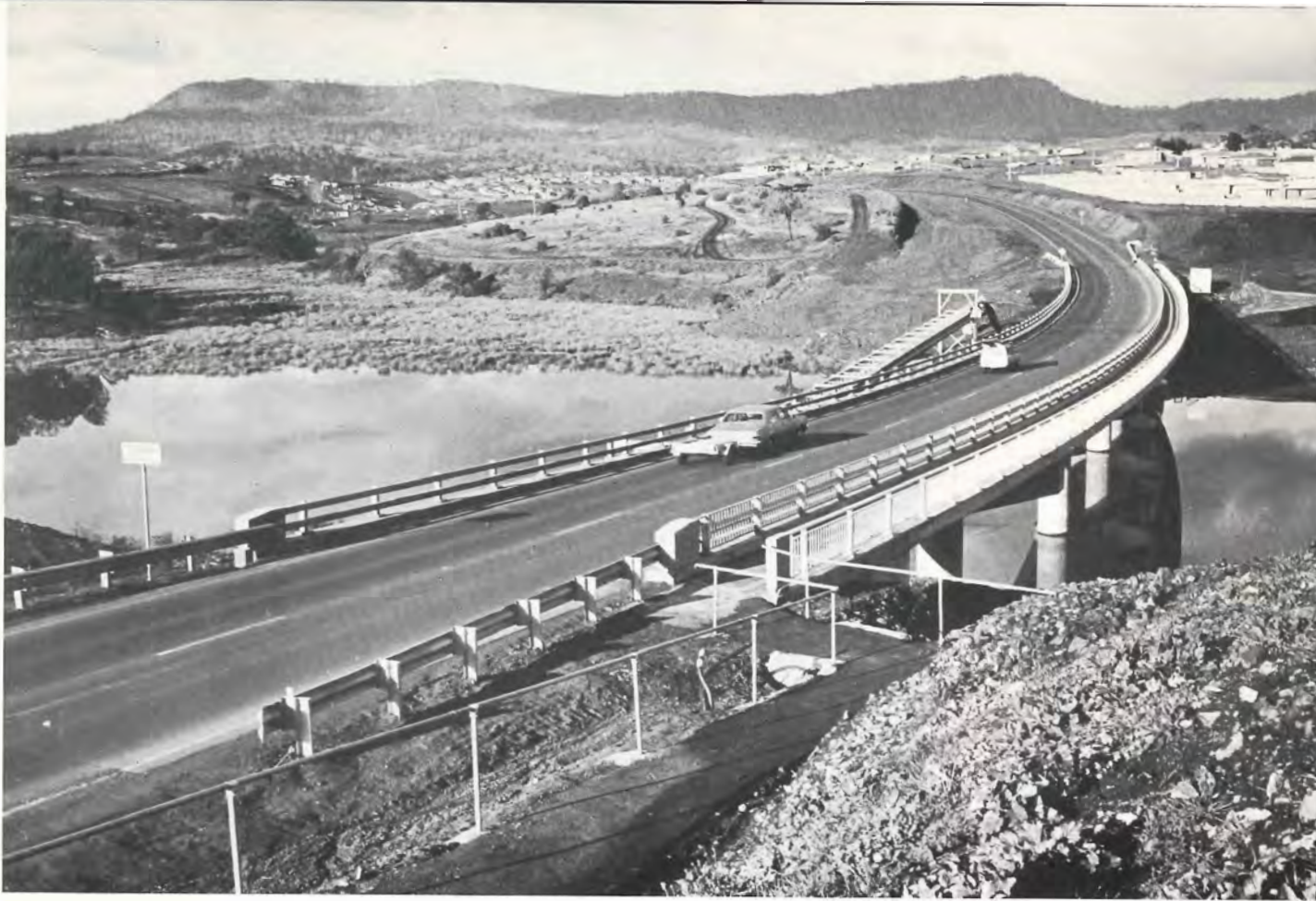
Mackintosh River Bridge —
Murchison Highway Relocation
Twin Circular Columns
being prepared for structural
steel decking.



Bowen Bridge — River Pier Cofferdam Section being positioned. Note Jacking System.

Bowen Bridge — Wilkinsons Point Casting Yard showing Casting Moulds for Pier Cofferdams.





Jordan River Bridge — East Derwent Highway, Bridgewater.

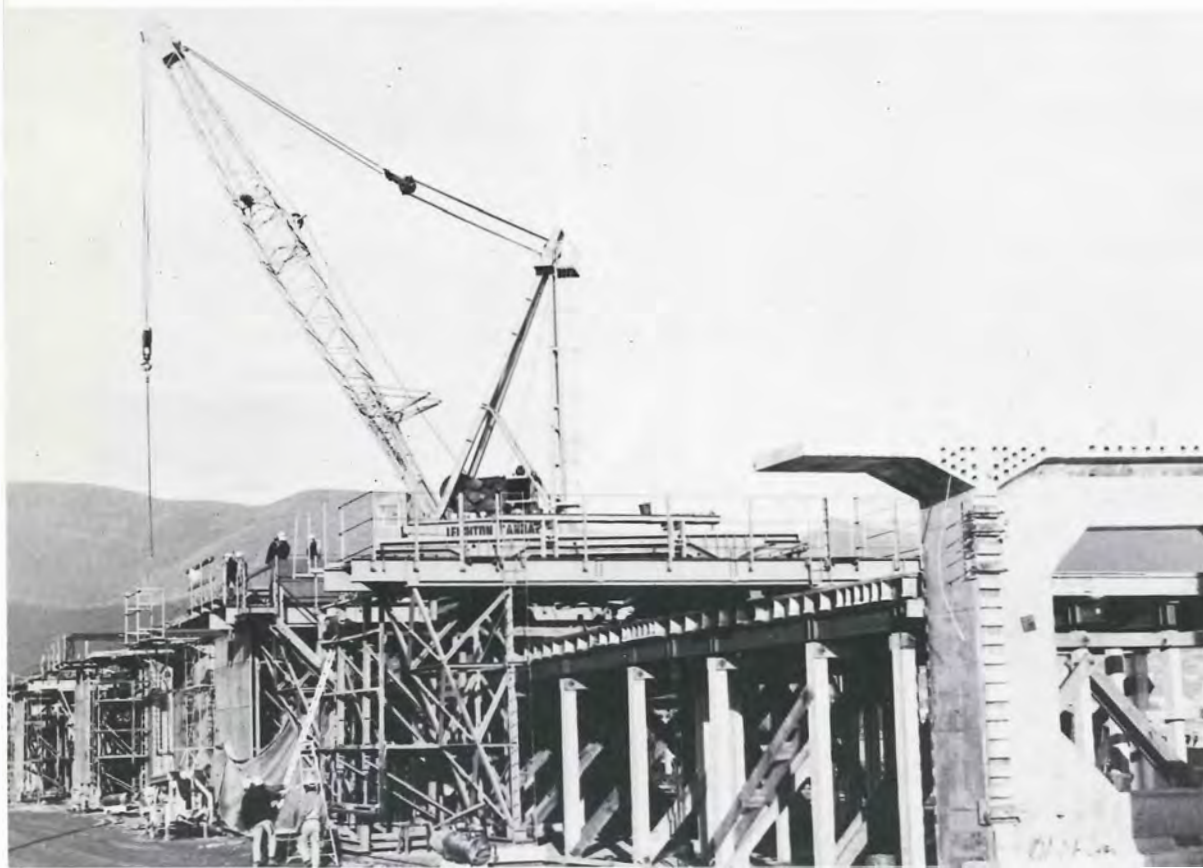
Alanvale Connector — East Tamar Outlet, Launceston.





Bowen Bridge — Construction of Eastern Abutment and River Piers.

Bowen Bridge — Wilkinsons Point Casting Yard showing one of Casting Platforms and some Pre-cast Matching Segments.



Jordan River Bridge — East Derwent Highway

Started in August 1977, this six span, 177 metres long bridge was opened to traffic on 6 February 1981. The superstructure consists of prestressed concrete beams acting compositely with the concrete deck, and is supported on piers having single concrete circular columns and concrete retaining wall type abutments. The piers are founded on piles in the river and spread footings on land. The temporary Bailey Bridge, which this structure replaced, was dismantled.

Castra Main Road Overpass — Ulverstone By-Pass

This overpass is a two span 57 metres long structure consisting of a broad flanged prestressed concrete beam superstructure, with one span over the Ulverstone By-pass and the other span allowing for future widening of the By-pass. Construction commenced in October 1979 and the overpass was opened on 29 August 1980.

The reinforced concrete substructure is founded on steel universal bearing piles. The sides of the superstructure feature exposed aggregate fascia panels, with similar slabs being used on the spill-through batters at the abutments.

Emu River Pipe Bridge — Bass Highway

This three-span 56 metres long, self-supporting 1 200 mm diameter steel pipe bridge, together with 65 metres of r.c. pipes on the discharge side, was started in June 1980 and completed on 12 January 1981.

It replaces two A.P.P.M. effluent discharge pipelines which crossed the Emu River where the new northern carriageway bridge is being built as part of the duplication of the Bass Highway. These two effluent pipelines and their truss bridge supports were demolished on completion of the Pipe Bridge.

The Pipe Bridge is supported by reinforced concrete piled piers.

Black Snake Road Underpass — Northern Outlet Road

This underpass has been completed. Reinforced earth panels and associated backfilling were used for the first time in Tasmania to support the abutment sill beams of this single span structure.

Hobart Eastern Outlet Road — Rosny Hill to Mornington Junction

The section from Rosny Hill to Mornington Junction at East Warrane was constructed and opened to traffic in December 1980.

Station Road, St Leonards

The section between North Esk River Bridge and Blessington Main Road (St Leonards Road) was reconstructed on a new alignment.

Bridport Main Road

Strengthening and sealing was completed between Golconda turn-off and Pipers Brook.

Elderslie Main Road

Reconstruction from Brighton to Elderslie was virtually completed during the year.

Nubeena Secondary Road

Reconstruction of this road is now complete with the finish of widening in Nubeena.

East Tamar Outlet Road

This project has now been completed, except for asphalt wearing course on 1 km, and was opened to traffic in April 1981.

Ulverstone By-Pass Construction

The roadworks for the Ulverstone By-pass were completed and opened to traffic in August 1980.

H.E.C. Pieman Road

The project was completed except for minor items of work.

MAJOR WORKS IN PROGRESS**Clyde River Bridge — Lake Highway**

This seven span, 153 metres long bridge is being constructed 400 metres upstream from the existing timber bridge which it will replace in the summer 1983-84. The superstructure, which consists of prestressed concrete beams acting compositely with the concrete deck, will be supported on concrete piers and abutments founded on spread footings.

Emu River Bridge — Bass Highway

This three span, 42 metres long bridge is being constructed adjacent to and downstream of the existing arch bridge, as part of the duplication of the Bass Highway between Old Surrey Hills Road and Heybridge. The superstructure is of composite construction with a concrete deck on prestressed concrete beams, supported by piled open piers and abutments, one of the latter being supported on piles and the other on spread footings. The bridge is expected to be completed by June 1982.

Wivenhoe Railway Underpass — Bass Highway

This railway underpass will span the single track railway adjacent to the existing railway bridge, again being a part of the duplication of the Bass Highway. Because of the extreme skew, the length of this bridge is 56 metres with 65 metres of crib retaining wall on the ends of the bridge to retain the embankment fill. The superstructure consists of prestressed concrete deck panels acting compositely with a concrete deck, the skewed ends of the deck being supported by prestressed concrete box beams. The underpass abutments are a mixture of beam and cantilever types.

Mountain River Bridge — Ranelagh Secondary Road

This three span, 45 metres long bridge is being constructed adjacent and downstream of the existing timber bridge which it will replace in late 1982. The superstructure is of composite construction with a concrete deck on prestressed concrete beams, supported by concrete wall piers and cantilever type abutments.

Nive River Bridge — Lyell Highway

The load carrying capacity of this existing three span 50 metres long bridge is being improved by strengthening of the steel girders and replacement of the timber deck by a concrete composite deck on these girders. Whilst this work is being carried out, traffic using the highway is being re-routed over a temporary low-level by-pass adjacent to this bridge. Completion of these strengthening works is expected in August 1981.

Westbury Road Permanent and Temporary Overpasses — Southern Outlet Road, Launceston

In order to construct the permanent overpass, it was first necessary to construct a temporary bridge adjacent to the site to carry traffic using the Bass Highway for a period of up to two years. The permanent overpass should be ready for carrying traffic at the end of that time.

When traffic is eventually transferred to the permanent structure, the material used for the temporary overpass will be dismantled and stored for use on other projects.

The permanent overpass, which is of two spans and 48 metres in total length, has a superstructure of composite construction comprising a concrete deck on prestressed concrete beams. The substructure consists of concrete cantilever type abutments and a concrete pier founded on spread footings. Beam manufacture is well advanced.

Murchison Highway Relocation

Work has commenced on the construction of new two lane bridges over the Murchison and Mackintosh Rivers. These bridges will replace the existing one lane bridges which will be flooded as part of the H.E.C.'s Pieman River Power Development Scheme. The current program requires both bridges and associated highway deviations to be completed by March 1983.

The Murchison River Bridge is a four span, 100 metres long bridge having a superstructure consisting of steel girders acting compositely with a concrete deck supported by twin circular concrete columns founded on individual footings dowelled into the rock, and spill-through abutments with twin rectangular columns and crosshead.

The Mackintosh River Bridge is a three span, 62 metres long bridge of similar construction to the Murchison River Bridge except that the abutments are the normal cantilever type.

The length of the roadworks for the Murchison and Mackintosh River projects are 1.1 km and 0.32 km, respectively.

Bridges on the Longford Deviation

(i) *South Esk River Bridge* — This six span, 181 metres long bridge is the main river structure on the Longford Deviation of the Illawarra Main Road. The superstructure which consists of prestressed concrete beams with a composite concrete deck is supported on solid concrete piers and abutments all founded on piles. The bridge is scheduled for completion in late 1981.

(ii) *South Esk Flood Opening No. 1* — This large flood opening is of similar construction to the South Esk River Bridge, but has four spans giving a total length of 115 metres. Completion is expected in August 1982.

(iii) *South Esk Flood Opening No. 2* — This seven span 93 metres long bridge has a superstructure consisting of prestressed concrete planks acting compositely with a concrete deck supported on single-row piled open piers and abutments. Completion is expected in late 1982.

(iv) *Back Creek Bridge* — This three span, 40 metres long bridge, is of similar construction to the Flood Opening No. 2. Completion is expected in early 1983.

Bowen Bridge

Major progress was made on the construction of the Bowen Bridge at Dowsing Point during the year. At Wilkinsons Point precasting of massive concrete units was carried out. Pier coffer dam rings and caisson caps were prefabricated prior to being transported by crane barge to the bridge site. Production of deck segments was commenced on two long line casting beds.

Precast coffer dams were placed in position at four river pier positions and Pier 9 on the eastern shore was constructed. Construction of the eastern and western abutments was virtually completed.

Midland Highway

Reconstruction has been completed north to Bishton Creek and Jericho by-pass is now under construction with earthworks and sub-base substantially complete to Stonor Road. Work is continuing towards Oatlands.

Arthur Highway

Apart from 0.45 km near Sorell the section to Forcett is virtually complete. The last 3.2 km near Forcett has a temporary seal which will be over-sealed in 1981-82.

Hobart Eastern Outlet Road

From Mornington junction to Tunnel Hill the new climbing lane is carrying traffic but has yet to have an asphalt wearing surface and the adjacent shoulder has to be sealed. The median island to the east of the junction also will be completed and landscaped in 1981-82.

Grass Tree Hill Secondary Road

The unsealed section, 2 km long, has been reconstructed with 1 km being completed with asphalt surface and the remainder having a temporary seal.

Hobart Northern Outlet Road

Work continued on the interchange at Berriedale and Granton. Sections of Berriedale Road and Black Snake Lane were completed. Heavy earthworks north of Black Snake Lane were substantially completed and a start was made on the Radcliff Crescent deviation.

Lyell Highway

The pavement between New Norfolk and Lawitta was widened and sealed with a temporary seal and the curve at Lawitta rail crossing was reconstructed.

Huon Highway

Work progressed from Shipwrights Point to north of Castle Forbes Bay. The first section to Back Road was completed, the next section to Castle Forbes Bay was reconstructed and surfaced with a temporary seal and earthworks were started north of Castle Forbes Bay.

East Tamar Highway

Two south-bound climbing lanes, totalling 3.8 km near the Thermal Power Station and begun last year, were completed during the year. A climbing lane for north-bound traffic was completed between Alanvale Connector and Thomsons Lane in Alanvale and this will be continued to Rocherlea in 1981-82. A parking lane will also be provided from Alanvale Connector to Lilydale Main Road.

Mathina Secondary Road

Pavement was completed and bitumen surface applied between 2.8 and 11.2 km from Fingal except two bridge approaches that had been sealed previously and a 0.5 km section in approach to a culvert which will be sealed in 1981-82. Earthworks and pavement sub-base have been completed on a further 2.3 km towards Mathinna and earthworks are in hand on the gap between the South Esk River bridge and this year's seal.

Tasman Highway

The section 3.5 km long from Scottsdale to Lings Siding was completed and sealed and work started where it was finished the previous year at L 77.2 km.

Bass Highway

The section from Latrobe to Winspears Road was completed and work is progressing towards Devonport. Work is also in progress between Old Surrey Road and Chasm Creek where material excavated from Round Hill is being placed in embankment at Wivenhoe.

Waratah Highway

Reconstruction has been completed south of Somerset to Takone turn-off except for a 2 km section south of Yolla that will be sealed next year. The narrow cliff section at the Cam River will also be reconstructed in 1981-82.

Zeehan-Strahan Road

Earthworks were completed on 5.2 km Henty deviation and placing of the pavement sub-base is well advanced.

Port Arthur By-Pass

Earthworks on the 1.5 km by-pass were started.

Launceston Southern Outlet Road

North of Westbury Road the Glen Dhu Primary School oval has been relocated and about 20 per cent of earthworks has been done. Earthworks have been started between Strathroy and Mt Pleasant Interchange.

ROAD MAINTENANCE

Mild climatic conditions have again enabled the Department to concentrate on maintaining the road system without resources being diverted to emergency works.

BITUMINOUS SURFACING

Details of the bituminous works undertaken are shown in Annexure C. The recent steep increase in bitumen prices stabilised during the year with the result that the planned program was achieved with very little alteration.

Experimental sections of reseals were laid to test the effectiveness of latex, crumbed rubber and artificial rubber in bitumen in overcoming cracking of sealed surfaces. The sections are being observed and assessed.

BRIDGE MAINTENANCE**Batman Bridge**

Maintenance work during the year was restricted to repainting of sections of the underside of the deck where deterioration of paintwork carried out in 1974 and 1975 had occurred. Completion of the inspection of the superstructure at deck level has been deferred until the forthcoming year.

Deformation of the deck surfacing at the eastern end of the bridge has been causing some concern. Preliminary investigations have been conducted into the causes, and to determine the extent and method of remedial work should it become necessary.

Bridgewater Bridge

During the year, demolition and reconstruction of diaphragm walls of two approach span piers was carried out. This work was made necessary due to extensive spalling of the concrete as a result of corrosion of reinforcing steel. Similar treatment of the remaining piers will be required in the future.

A detailed inspection of the superstructure of the approach span confirmed that paintwork deterioration has reached the stage where repainting should be undertaken in the near future.

In recent years it has become evident that the timber fendering which protects the navigation span has deteriorated to the extent that its renewal is necessary. In anticipation of this, some new piles were driven at the time of the lift span deck renewal in 1980.

Expenditure in the year on maintenance of the lift span machinery showed a marked increase. This was attributed mainly to faults in the electrical equipment. Expert advice was sought and as a result it was recommended that most of the electrical wiring and some of the control equipment should be replaced as a matter of priority. Since the original wiring on the bridge has now been in service for nearly forty years, much of the rubber insulation has deteriorated to an unacceptable condition.

Liftspan openings during the year were as follows:—

Newsprint vessels	...	...	...	...	...	...	...	...	584
Ferry and charter	...	...	...	...	...	...	...	...	70
Other private	...	...	...	...	...	...	...	...	61
Test and maintenance	...	...	...	...	...	...	...	...	19
Total	...	...	...	...	...	...	...	...	534

This represents a slight decrease on 1979–80 movements.

Denison Canal Bridge

Inspections indicate that whilst the bridge is still in sound structural and mechanical condition, deterioration of the protective treatment of the steelwork has reached the stage where remedial work will shortly be necessary.

Progressive silting of the approach channels to the canal is recurring following the last major dredging in 1974. In an attempt to defer the need for general dredging it may be expedient to carry out a limited program of dragging of the canal bed which will be aimed at removal of some of the shallower deposits. This possibility is under investigation.

Vessel movements through the canal which required the opening of the bridge totalled 1 088 in 1980–81. This was a slight decrease on last year's figure.

Huonville Bridge

A major painting program on the Huon River bridge at Huonville was completed during the year. This was the first general repainting of the bridge since it was built in 1959.

Tasman Bridge

A program of inspection of the main viaduct above and below deck level was commenced during the latter part of the year. This work, which is to identify and correct minor problem areas, was the subject of prior agreement between the Department and the Joint Tasman Bridge Restoration Commission.

Unfortunately, due to a lack of resources, not all the work which had been scheduled could be carried out. However it was noted that all sections of the structure which were inspected showed continuing satisfactory performance.

In August 1980, the Department accepted responsibility for monitoring of the position of the 'Lake Illawarra'. Readings to date indicate that only a small amount of movement of no significance has taken place. Arrangements are being made to remove some of the underwater instrumentation for routine overhaul.

JETTIES, WHARVES AND FERRIES

Risdon Ferry

The steel-hulled ferry 'Bowen', which was built following the Tasman Bridge Disaster, was sold during the year for use on the Bowen Bridge construction work.

The remaining timber-hulled ferry 'Princess' is being maintained at Risdon until the completion of the Bowen Bridge.

Bruny Ferry Berths

Extensive maintenance was again necessary at the Barnes Bay terminal. The repairs and some improvements which were made should ensure that the terminals can be kept in service until the completion of the new facilities.

INVESTIGATIONS AND MATERIALS TESTING

The Materials and Research Section continued to provide testing and consulting services for the design, construction and maintenance functions of the Department. It also provided specialised services to other Departments. The work of the section included pavement condition studies (strength, roughness, skidding); route selection studies (excavation properties, slope stability, pavement design), materials testing (soil, asphalt, concrete, paint etc.) for the design and construction of pavement and bridge structures and for the selection of tender samples and construction and product control.

During the year major route feasibility and design studies were completed for Deloraine By-pass, Bass Highway; Lawitta to Hayes, Lyell Highway; Blackmans Bay to Channel Highway, Algona Road and Flagstaff Gully Connector, Warrane.

Investigations for foundations of eight structures and for slope stability of seven sites were undertaken.

LANDSCAPING

The Department's Nursery provided 23 500 plants for planting on road construction sites. The main planting projects were Ulverstone By-pass (incomplete), East Tamar Outlet, Hobart Eastern Outlet, Midland Highway (continuing).

CONSTRUCTION PLANT AND WORKSHOPS

GENERAL

The Plant Division, which incorporates the Workshops at Moonah, Launceston and Ulverstone, provides plant and workshop facilities for the Department's construction and maintenance activities on roads and bridges.

Plant usage in 1980-81 was generally similar to that of the previous year and the income from Plant Hire amounted to an increase of 16 per cent over the previous year. This increase was due mainly to an increase in the Hire Rates.

PLANT OPERATIONS

Exceptions to the general plant usage pattern occurred in the case of tracked loaders and the smaller wheeled loaders. The former units have experienced a lessening of demand due to the greater use of hydraulic excavators and steps are therefore being taken to reduce the holdings of these items.

Further petrol powered trucks were replaced with diesel powered units during the year and it is hoped that all such units with a capacity of 7.5 m³ will be replaced over the next year.

Staff and Light Vehicle Fleet

The staff vehicle pool is now well established. There is a possibility of further increases occurring in the central pool operations because of the continuing increase in demand by other Government Departments for the use of such vehicles and fuel supplies.

This year has also seen a marked swing towards increasing the proportion of lighter, 4-cylinder vehicles in the utility and panel van group. This is in accordance with Government policy on this matter.

Defensive Driving Seminars were again held in all three district centres and eighty-six personnel attended. These training seminars were conducted by the Division of Road Safety.

The frequency of vehicle accidents increased during 1980-81 from 0.5 accidents per 100 000 km in the previous year to 0.63 in the current year. Many of these accidents were minor but steps are being taken to limit, as far as possible, further escalation.

Radio Telephones

There are six base stations and 130 mobile stations operating in the state, seven of which are personal mobiles. In addition there are forty-five hand held mobiles, operating on 27-240 MHz, licensed for use in the various districts and sections.

Testing is almost complete for the proposed change of frequency, from 77.18 to 77.615 MHz, at base stations operating at Mt Barrow, Sister Hills, Mt Read and Alonnah. It is anticipated that, should the final test at Mt Barrow be successful, the change-over for base stations and mobiles in the north of the State will be completed by October of this year.

Flashing Light Trailer

On 21 November 1980 the first unit was placed in operation and has proved to be a great asset in controlling traffic in the vicinity of a lane closure. The trailer was used in 88 lane closures on the Tasman Bridge, Eastern Outlet and Northern Outlet. The unit which was built in the Moonah Workshops was based on a design developed by the Country Roads Board of Victoria.

APPRENTICES

Moonah based first year metal trades apprentices were again included in the Hydro-Electric Commission's training course which involved off-the-job training periods of either twelve or twenty weeks duration, depending upon trade category.

The number of apprentices currently undergoing training in the Department's workshops is sixty-eight (68) made up as follows:—

[illegible]

DEPOTS AND WORKSHOPS

The Workshop Production Account recorded an annual turnover of just over \$5 million.

Major works carried out during the year, apart from the main function of plant repairs, consisted of steel fabrication for overpasses at the Launceston Grammar School and the TCAE an Newstead, a footbridge at the Detention River and Box Beam Guardrail for the Eastern Outlet Road.

Depot improvements included a new office for the Workshop Foreman at Ulverstone and extensions of concrete hardstanding at Ulverstone and Moonah.

FINANCIAL STATEMENTS

The Plant Division operates with a March to March financial year. The Division trading account is the Road Construction Plant Suspense Account which must be kept as required by section 6 of the Roads and Jetties Act 1935.

The Road Construction Plant Suspense Account financial statements for the period 23 March 1980 to 21 March 1981 are reported in Annexure D.

ADMINISTRATION

GENERAL

The implementation of Government zero growth policies within the Department has stretched existing staff resources and curtailed some desirable expansion of activities in certain fields. However, commendable efforts have been made to meet all current and new demands for service, both from within and outside the Department.

The Department's Internal Audit Section has continued its task of identifying any management and accounting deficiencies throughout the Department and recommending changes in procedures to rectify these.

STAFF

At 30 June 1981 there were 415 positions on the Department's establishment and the actual number of staff employed was 409.

The composition of this staff was —

Administrative officers, accountants and clerical officers	109
Engineers	79
Surveyors and survey staff	34
Scientific officers, technical officers, engineering assistants and technicians	82
Draftsmen	55
Keyboard classifications	30
Other classifications	20
TOTAL	409

The distribution of staff to the various locations of the Department was as follows:—

Head Office, Murray Street, Hobart	218
South-East District Office, Derwent Park	20
North-East District Office, Launceston	48
North-West District Office, Ulverstone	39
Central Workshops and Stores, Moonah	48
Materials Laboratory, Derwent Park	27
Kirksway House, Battery Point	9
TOTAL	409

Mr W. J. Brown was promoted to the position of Executive Officer, Property Section and Mr D. M. McMahon was promoted to the position of Supervisor, North-East District. Mr C. A. Duncombe was appointed to the position of Inspector, and Mr W. R. Prior was appointed to the position of Plant Inspector.

The following long-serving officers retired or died during the year:—

Mr C. R. Willing, Principal Engineer — 44 years service.
 Mr J. E. C. Deeth, Supervisor — 35 years service.
 Mr B. R. Commin, Clerk — 21 years service.
 Mr C. C. S. Hill, Executive Officer — 12 years service.
 Mr J. Corner-Walker, Engineering Assistant — 16 years service.
 Mr R. Hall, Clerk — 14 years service.
 Mr B. A. Jones, Telephonist (deceased) — 16 years service.
 Mr R. W. Hoare, Inspector — 17 years service.
 Mr R. J. Milligan, Engineering Assistant — 16 years service.

STUDY COURSES AND STAFF DEVELOPMENT

At present three officers holding University Scholarships for the Engineering Faculty are assisted with living allowances and the cost of fees at the University of Tasmania.

Several officers are attending University part-time to study economics or allied subjects, and twenty-four others received time off to study work-related subjects in other tertiary establishments.

Staff development courses have been reduced to essential sessions only during the year because of restraints on the time of professional, technical and administration officers.

The Department has taken over and implemented certain induction responsibilities from the Public Service Board Department. This measure has given young officers an improved outlook on their career prospects in the Department.

INDUSTRIAL

Wage rates continued to rise, mainly as a result of National Wage and work value decisions.

Departmental relationships with unions remained very good and only a small amount of time was lost due to industrial action.

As at 30 June 1981 the number of employees engaged in workshop and field operations were —

Workshops and depots	274
Road and bridge construction and maintenance	874
TOTAL	1 148

Retirements for the year totalled forty-six and a number of these served the D.M.R. for many years. Notable retirements were —

Retirements Due to Age —

Mr S. J. McGinniss, Foreman — 41 years service.
 Mr M. Hardy, Foreman — 38 years service.
 Mr C. F. Chugg, Truck Driver — 30 years service.
 Mr D. G. Swan, Pick and Shovelman — 26 years service.
 Mr D. J. Marshall, Plant Operator — 25 years service.
 Mr J. Young, Truck Driver — 24 years service.

The number of cases processed by the Committee was slightly less than in previous years. However, some fifteen cases were assessed and of these five have been rehabilitated, five retired or terminated and five still to be finalised.

The Committee experienced difficulty in some cases because of the present work situation which restricted avenues of rehabilitation of some employees.

PROPERTY ACQUISITIONS

During 1980-81 a total of 142 new acquisitions were commenced and at the end of the financial year 329 acquisitions were in progress. The issue of Notices to Treat for several National Highway projects has resulted in an increase in the number of compulsory acquisitions and at the end of the 1980-81 financial year sixty-seven acquisitions were subject to compulsory process compared with thirty-five at the end of the previous year. Expenditure on property acquisitions for the year was \$1 873 655 compared with \$810 082 for the preceding year.

The major areas of expenditure included the purchase of properties affected by the construction of the Launceston Southern Outlet Road and the Ulverstone By-Pass and other important projects were the reconstruction of the Midland Highway and the Waratah Highway. The reconstruction of the Tasman Highway at Scottsdale and the Preston Main Road resulted in many minor property acquisitions.

Over the years the Department has acquired a number of residential or commercial properties in advance of requirements because of hardship experienced by some property owners following the announcement of road proposals. Twenty-six such properties are leased to tenants.

Vacant land acquired in advance is also leased until required for road purposes and at present sixty-eight parcels of land are under lease.

CONTRACTS

The following contracts were entered into during 1980-81:—

<i>Contract No.</i>	<i>Description</i>	<i>Contract Price</i>
		\$
R/SE 345	Construction of Access Road to Roberts Point Ferry Terminal on Bruny Island	1 615 140-58
R/SE 350	Provision of Tow Truck Service on Tasman Bridge —	
	Monthly	775-00
	Weekly	180-00
	Hourly	8-00
B/SE 351	Supply and Installation of 4 tonne Haulage Winch at Dunalley Slipway	15 007-00
B/NW 352	New Emu River Bridge, Burnie Supply of Steel Pile Casings	40 462-00
P/SE 355	Maintenance and servicing of—	
	1. Navigation and Feature Lighting and associated Facilities on Tasman Bridge,	
	2. Power Supplies to related Signal Gantries on Tasman Highway,	
	3. Navigation Lighting and Associated Facilities on Temporary Bailey Bridge at Dowsings Point	Schedule of Rates
B/NW 356	Murchison River Bridge on Murchison Highway near Tullah — Structural Steelwork and Protective Treatment	124 916-00
R/NW 359	Supply and lay approximately 1 700 tonnes of Asphalt on Waratah Highway between Hellyer River Bridge and Henrietta	98 935-00
R/NW 360	Supply and lay approximately 850 tonnes of Asphalt on Bass Highway between Mt Hicks Secondary Road and Reservoir Drive, Wynyard	45 727-10

<i>Contract No.</i>	<i>Description</i>	<i>Contract Price</i>
		\$
R/SE 361	Supply and lay approximately 490 tonnes of Asphalt on Grass Tree Hill Secondary Road between Risdon Vale and Richmond (R1.83-R1.12)	18 987.76
R/SE 362	Supply and lay approximately 1 631 tonnes of Asphalt on Tasman Highway — Acton Road to Llanherne	60 392.87
R/SE 363	Supply and lay approximately 1 800 tonnes of Asphalt on Midland Highway between Bridgewater and Brighton	66 910.99
R/SE 369	Supply and lay approximately 1 877 tonnes of Asphalt on Grass Tree Hill Secondary Road (R4.7-R3.4)	69 755.14

AGREEMENTS

Contracts below \$10 000 in value are usually the subject of a simplified form of contract termed 'agreements'. The following agreements were entered into during 1980-81:—

	<i>Bridges</i>	<i>Sealing</i>	<i>Gravel</i>	<i>Others</i>	<i>Total</i>
North-West District	....	9	19	10	38
North-East District	....	16	18	19	53
South-East District	....	37	19	18	74
Head Office	13	....	2	6	21
TOTALS	13	62	58	53	186

STORES

The construction and plant stores requirements of the Department are managed through a decentralised stores system, with a principal store at the main workshop complex at Moonah and major branch stores at the District Offices in Launceston and Ulverstone.

The total value of all stores issued during the year from the three centres was approximately \$2.095 million and the value of stores holdings at 30 June 1980 was slightly in excess of \$860 000.

The Supply and Tender Department has increased considerably the number of items for which it has let contracts on the Department's behalf. Ordering of these items is therefore carried out direct by the Department's Stores staff and this has imposed a substantial additional workload.

A good deal of reliance is placed on local and contract suppliers for spare parts and increasingly staff resources are directed to the location of reliable suppliers and the follow-up of orders to expedite delivery. The Department has also adopted a system of holding many basic automotive spare parts on consignment from suppliers and this ensures that stores redundancy is reduced, because the unused section of such consignments can eventually be returned to the supplier at no cost when the Department moves out of that particular type of plant unit.

Documentation of the A.D.P. assisted Stores System has been completed and implementation is now underway. All items held at Launceston and Ulverstone were brought into the system and the transfer of items at Moonah is proceeding and should be completed during the next financial year.

ACKNOWLEDGMENT

I express my appreciation to the staff and employees of the Department for the manner in which they have responded to all demands placed upon them during the year.

On behalf of the Department I extend thanks to all the State and Commonwealth Departments and Local Government bodies which have co-operated with or provided assistance to the Department during the year.

26 November 1981.

G. E. C. McKERCHER, Director of Main Roads.

ANNEXURE A
LOAN FUND EXPENDITURE 1980-81

1979-80 \$		1980-81 \$
	<i>Roads and Bridges—</i>	
200 000	Bridge renewals generally	135 000
1 130 761	Hobart Eastern Outlet Road	804 479
....	Access Road to Roberts Point Ferry Terminal	749 316
500 000	Tasman Highway, Scottsdale to Ringarooma Turnoff	500 000
500 000	Huon Highway, Huonville to Geeveston	500 000
467 495	Strahan-Zeehan Road	338 646
600 000	Illawarra Main Road, Deviation at Longford	585 000
1 744	Access Road to Kingston Fire Station	7 559
1 100 000	East Tamar Outlet	450 000
311 500	Refund to Consolidated Revenue for Administration	210 000
\$4 811 500	TOTAL (Roads and Bridges)	\$4 280 000
	<i>Other Works—</i>	
60 805	Launceston Flood Protection	187 243
150 000	Jetties and Facilities for Fishermen	124 624
\$210 805	TOTAL (Other Works)	\$311 867
\$5 022 305	TOTAL (All Works)	\$4 591 867

ANNEXURE B
FINANCIAL ASSISTANCE TO LOCAL GOVERNMENT AUTHORITIES

1979-80 \$		1980-81 \$
	<i>Direct Grants—</i>	
366 600	Rural Arterial Roads — Construction	299 649
3 562 873	Local Roads — Construction	3 683 743
1 825 455	Maintenance	1 802 223
357 072	Urban Arterial Roads — Construction	375 000
210 563	Minor Improvements for Traffic Engineering and Road Safety	72 887
\$6 322 563	TOTAL	\$6 233 502
	<i>Work on Council Roads Financed and Carried out by D.M.R.—</i>	
1 247 778	Repair and Renewal of Bridges	1 591 572
143 117	Roadworks	250 214
\$7 713 458	TOTAL	\$8 075 288

ANNEXURE C
BITUMINOUS SURFACING COMPLETED 1980-81 (km)

Hot Bitumen Sprayed Seal						
Road	Prime and Seal	Reseal	Primer Seal	Winter Seal	Asphalt	Total
South-East District —						
Arthur Highway	....	2.20	3.16	....	....	5.36
Channel Highway	....	5.68	....	....	....	5.68
East Derwent Highway	....	....	1.12	....	0.46	1.58
Eastern Outlet	....	....	....	....	3.95	3.95
Huon Highway	1.43	12.15	1.20	....	....	14.78
Lyell Highway	....	10.75	2.64	....	0.52	13.91
Midland Highway	1.26	29.30	0.63	....	2.62	33.81
Northern Outlet	....	....	....	....	0.24	0.24
Tasman Highway	....	0.25	0.36	....	1.99	2.60
Colebrook Main Road	....	0.72	....	....	....	0.72
Elderslie Main Road	7.85	....	....	....	....	7.85
Lymington Main Road	....	5.55	....	....	....	5.55
Boyer Secondary Road	....	6.14	....	....	....	6.14
Ellendale Secondary Road	....	4.61	....	....	....	4.61
Grass Tree Hill Secondary Road	....	....	....	1.06	1.02	2.08
Nubeena Secondary Road	....	....	0.21	....	....	0.21
South Arm Secondary Road	....	8.43	....	....	....	8.43
Blowhole Tourist Road	....	3.91	....	....	....	3.91
Tasman Arch Tourist Road	....	1.24	....	....	....	1.24
North-West District						
Bass Highway	0.49	7.28	....	....	12.78	20.55
Waratah Highway	5.36	....	....	....	2.22	7.58
Frankford Main Road	....	6.72	....	....	....	6.72
King Island Main Road	....	3.90	....	....	....	3.90
Pine Main Road	....	....	....	....	1.44	1.44
Preston Main Road	....	1.57	....	....	....	1.57
Sheffield Main Road	....	8.84	....	....	....	8.84
Wilmot Main Road	....	9.18	....	....	....	9.18
Mt Hicks Secondary Road	....	9.56	....	....	....	9.56
Corinna Dev. Road	0.23	....	....	....	....	0.23
North-East District						
Bass Highway	....	....	....	....	1.10	1.10
East Tamar Highway	....	....	....	2.99	....	2.99
Midland Highway	....	15.85	....	....	....	15.85
Tasman Highway	3.41	8.23	....	0.70	9.35	21.69
West Tamar Highway	....	9.31	....	....	....	9.31
Bridport Main Road	6.70	....	....	....	....	6.70
Dalrymple Main Road	....	17.11	....	....	....	17.11
Esk Main Road	....	8.43	....	....	....	8.43
Hillwood Main Road	....	1.57	....	....	....	1.57
Lady Barron Main Road	....	6.59	....	....	....	6.59
Lilydale Main Road	....	11.14	....	....	....	11.14
Poatina Main Road	....	....	....	....	1.82	1.82
Winkleigh Main Road	....	....	....	0.75	....	0.75
Mathinna Secondary Road	8.42	....	....	....	....	8.42
Batman Dev. Road	....	....	....	....	1.63	1.63
TOTAL	35.15	216.21	9.32	5.50	41.14	307.32

In addition to the seals, reseals and asphalt surfacing shown in the table the following bituminous works were undertaken but because of various widths and junction areas they are shown as quantities rather than as lengths:—

Bass Highway, Ulverstone By-pass and associated works —

14 654 square metres of prime and seal.

East Tamar Outlet —

1. Dual Carriageway at South End, 16 008 square metres of prime and seal.
2. Between Mowbray Connector and George Town Road, 5 216 tonnes of asphalt.

East Tamar Highway, Climbing Lanes. 3 382 tonnes of asphalt.

Preston Main Road, junction with Kings Parade, Ulverstone, 140 tonnes of asphalt.

The following priming and sealing was done on other than classified roads:—

Station Road, St Leonards (L.T.R.) 1.3 km;

Pieman River Road (H.E.C.) 29.54 km.

ANNEXURE D
ROAD CONSTRUCTION PLANT SUSPENSE ACCOUNT 1980-81
INCOME AND EXPENDITURE STATEMENT

Period Ending 22.3.80 \$		Period Ending 21.3.81 \$
	<i>Income —</i>	
	<i>Earnings —</i>	
6 723 560	Plant Hire	7 798 457
4 638 887	Workshop Charges	5 292 454
29 509	Other Income	147 491
217 637	Net Profit on Sale of Plant and Stores and Stocktaking Adjustments	104 907
<u>\$11 609 593</u>	TOTAL	<u>\$13 343 309</u>
	<i>Expenditure —</i>	
5 425 879	Plant Operation and Maintenance	5 945 718
4 546 654	Workshop Operations	5 122 396
682 653	Plant Depot Administration and Maintenance	1 003 071
1 302 513	Provision for Depreciation of Plant, Equipment and Buildings	1 279 571
6 330	Net Loss on Sale and Write-off of Plant Stores and Stocktaking Adjustments	7 873
<u>11 964 029</u>		<u>13 358 629</u>
354 436	Excess of Expenditure over Income for Period	15 320
<u>\$11 609 593</u>	TOTAL	<u>\$13 343 309</u>

ROAD CONSTRUCTION PLANT SUSPENSE ACCOUNT 1980-81

Balance Sheet as at 21 March 1981

1980 \$		1981 \$
NATURE AND SOURCE OF FUNDS USED —		
<i>Funds provided by State Treasurer —</i>		
194 607	Valuation of Plant and Equipment held at 30 June 1945 and Stock on Hand held at 30 June 1946	194 607
3 140 730	Loan Funds	3 140 730
6 769	Commonwealth Grant	6 769
326 897	State Highways Trust Fund	326 897
2 913 489	General Reserve for Increased Cost of Plant Replacement	2 506 537
709 785	Accumulation Account	1 101 416
<i>Current Liabilities —</i>		
121 643	Sundry Creditors (Store)	96 515
620 220	Accrued Expenses	387 249
<i>Provisions —</i>		
9 015	Motor Vehicle Insurance	10 378
4 510	Plant Accident Insurance	2 194
<u>\$8 047 665</u>		<u>\$7 773 292</u>
THESE FUNDS ARE REPRESENTED BY—		
<i>Current Assets —</i>		
34 538	Cash at Treasury	229 782
316 175	Stock on Hand	374 137
55 285	Work in Progress — Deferred Charges	46 111
420 490	Accrued Charges — Plant Hire	416 280
83 886	Stores Issues	85 775
537 384	Workshops	428 523
3 890	Apprentice Tool Kits	4 572
<u>1 451 648</u>		<u>1 585 180</u>
<i>Fixed Assets—</i>		
14 057 604	Land, Buildings, Plant and Equipment at cost	14 557 948
(7 461 587)	Less Provision for Depreciation	(8 369 836)
<u>\$8 047 665</u>		<u>\$7 773 292</u>

STATEMENT OF SOURCE AND APPLICATION OF FUNDS

1980 \$		1981 \$
<i>Source of Funds —</i>		
354 436Cr	Profit from Operations	15 320Cr
1 302 513	Add Non-Cash Item Depreciation	1 279 571
948 077		1 264 251
208 920	Less Profit on Sale of Plant Less Costs	104 908
739 157		1 159 343
285	Increase in Motor Vehicle Insurance Reserve	1 362
380 865	Proceeds from Sale of Plant	296 411
706 646	Decrease in Working Capital	....
<u>\$1 826 953</u>		<u>\$1 457 116</u>
<i>Application of Funds —</i>		
....	Increase in Working Capital	391 631
1 096	Decrease in Provision for Plant Accident Insurance	2 316
74 865	Improvements to Depots	35 740
263 934	Purchase of New Plant	171 425
1 458 306	Purchase of Replacement Plant	817 389
28 752	Purchase of Workshop Equipment and Tools	38 615
<u>\$1 826 953</u>		<u>\$1 457 116</u>